

WHAT IS CLAIMED IS:

1 A holographic optical information recording/reproducing device that, to
reproduce digital data recorded in a form of interference fringes produced by
5 two coherent beams in a recording medium, projects a coherent beam to the
recording medium and receives a reproduction signal beam obtained by
diffraction at the recording medium by means of a two-dimensional
photodetector array, the holographic optical information recording/reproducing
device comprising:

10 a tunable coherent light source that emits the coherent beam; and
a control section that reads a position information of the reproduction
signal beam on the two-dimensional photodetector array, and controls a
wavelength of the tunable coherent light source according to the position
information.

15 2. The holographic optical information recording/reproducing device
according to claim 1, wherein at least one photoreceptor cell of the
two-dimensional photodetector array is divided into not less than two regions,
at least a part of the reproduction signal beam is made incident on the regions
20 of the divided photoreceptor cell so as to be used as a servo-use beam, and the
control section detects the position information according to a differential
signal derived from signals obtained at the respective regions by the servo-use
beam.

25 3. The holographic optical information recording/reproducing device
according to claim 1, further comprising:

an anamorphic optical system through which the coherent beam
passes,

30 wherein the control section detects a position deviation of the coherent
beam in a focusing direction and a wavelength deviation of the tunable
coherent light source independently, according to changes in a reproduced
image detected by the two-dimensional photodetector array.

35 4. The holographic optical information recording/reproducing device
according to claim 1, further comprising:

a beam splitter for dividing the coherent beam emitted from the
tunable coherent light source into two beams that are a signal beam and a

reference beam;

a spatial light modulator for modulating an intensity of the signal beam two-dimensionally;

an element for imparting a two-dimensional phase distribution to the signal beam on the spatial light modulator, the element having a greater coherence length in its peripheral region than in its central region; and

an optical system for crossing the signal beam and the reference beam on the recording medium.

5. The holographic optical information recording/reproducing device according to claim 4, wherein the element for imparting a two-dimensional phase distribution includes cells that are arranged in a two-dimensional square grid and that have phase shifts of any one of 0, $\pi/2$, π , and $3\pi/2$, and a phase difference between adjacent cells is either $\pi/2$ or $3\pi/2$.

6. The holographic optical information recording/reproducing device according to claim 1, further comprising a lens system for focusing diffracted light from the recording medium into the two-dimensional photodetector array, wherein the recording medium is disposed at a position different from a focus of the lens system.

7. The holographic optical information recording/reproducing device according to claim 2, wherein recording is carried out so that the servo-use beam of the reproduction signal beam is in an ON state constantly.

8. The holographic optical information recording/reproducing device according to claim 2, wherein recording is carried out so that the servo-use beam of the reproduction signal beam is in an ON state at a higher probability as compared with the other beam spots.

9. The holographic optical information recording/reproducing device according to claim 1, wherein the tunable coherent light source is a coherent light source utilizing a tunable semiconductor laser and a second-harmonic generation element.

10. The holographic optical information recording/reproducing device according to claim 2, wherein the divided photoreceptor cells are positioned at

the two-dimensional photodetector array.

項目	1990年	1991年	1992年	1993年	1994年	1995年	1996年	1997年	1998年	1999年	2000年	2001年	2002年	2003年	2004年	2005年	2006年	2007年	2008年	2009年	2010年	2011年	2012年	2013年	2014年	2015年	2016年	2017年	2018年	2019年	2020年	2021年	2022年	2023年	2024年	2025年	2026年	2027年	2028年	2029年	2030年	2031年	2032年	2033年	2034年	2035年	2036年	2037年	2038年	2039年	2040年	2041年	2042年	2043年	2044年	2045年	2046年	2047年	2048年	2049年	2050年	2051年	2052年	2053年	2054年	2055年	2056年	2057年	2058年	2059年	2060年	2061年	2062年	2063年	2064年	2065年	2066年	2067年	2068年	2069年	2070年	2071年	2072年	2073年	2074年	2075年	2076年	2077年	2078年	2079年	2080年	2081年	2082年	2083年	2084年	2085年	2086年	2087年	2088年	2089年	2090年	2091年	2092年	2093年	2094年	2095年	2096年	2097年	2098年	2099年	2100年																																																																		
1. 人口	12,000	12,500	13,000	13,500	14,000	14,500	15,000	15,500	16,000	16,500	17,000	17,500	18,000	18,500	19,000	19,500	20,000	20,500	21,000	21,500	22,000	22,500	23,000	23,500	24,000	24,500	25,000	25,500	26,000	26,500	27,000	27,500	28,000	28,500	29,000	29,500	30,000	30,500	31,000	31,500	32,000	32,500	33,000	33,500	34,000	34,500	35,000	35,500	36,000	36,500	37,000	37,500	38,000	38,500	39,000	39,500	40,000	40,500	41,000	41,500	42,000	42,500	43,000	43,500	44,000	44,500	45,000	45,500	46,000	46,500	47,000	47,500	48,000	48,500	49,000	49,500	50,000	50,500	51,000	51,500	52,000	52,500	53,000	53,500	54,000	54,500	55,000	55,500	56,000	56,500	57,000	57,500	58,000	58,500	59,000	59,500	60,000	60,500	61,000	61,500	62,000	62,500	63,000	63,500	64,000	64,500	65,000	65,500	66,000	66,500	67,000	67,500	68,000	68,500	69,000	69,500	70,000	70,500	71,000	71,500	72,000	72,500	73,000	73,500	74,000	74,500	75,000	75,500	76,000	76,500	77,000	77,500	78,000	78,500	79,000	79,500	80,000	80,500	81,000	81,500	82,000	82,500	83,000	83,500	84,000	84,500	85,000	85,500	86,000	86,500	87,000	87,500	88,000	88,500	89,000	89,500	90,000	90,500	91,000	91,500	92,000	92,500	93,000	93,500	94,000	94,500	95,000	95,500	96,000	96,500	97,000	97,500	98,000	98,500	99,000	99,500	100,000